



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel: 613 632-5200  
Fax: 613 632-5246

**POSITIVE RECALL**  
EFFECTIVE \_\_\_\_\_ AUTH \_\_\_\_\_  
RELEASED \_\_\_\_\_ DATE \_\_\_\_\_  
LIMITED RELEASE

D5805-1

Job Sheet 207480



Part No: D5805-1

Job Qty: 8 pcs

Part Name: Hoop



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/26/20

Job Tracking No:

Due Date: 3/27/20

Created By: Jennifer Renwick

Type: Stock

Description:

Note: URF 20-522 DWG D5805 REV.A IPP REV:A NEW ISSUE 20.01.15 JV VERF:DD

Ship Via:

## Bill of Materials

## Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Run Hrs	Workcenter/Supplier		Sign-off
							Workcenter / Supplier	Lead Time	
100	Large Fab - Welded Assy-1	8 pcs	3/27/20		0.00	2.67	Large Fab - 1		
							Large Fab - 10		
							Large Fab - 2		
							Large Fab - 3		
							Large Fab - 4		
							Large Fab - 5		
							Large Fab - 6		
							Large Fab - 7		
							Large Fab - 8		
							Large Fab - 9		
							Large Fab - 11 (Various)		
							Large Fab - 12		
110	QC	8 pcs	3/27/20		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
							QC 5 - 61		
							QC 5 - 61		



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
CANADA  
TEL.: 1 813 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

Container No: S261900



Part: D5805-1

Job No: 207480

Serial No/Batch: S261900

Revision: REV.A

Inspector:

Exp Date:

Instructions:

Date: 03/09/20

DAS  
40  
9-89

MAR 10 2020

Plex 3/5/20 8:29 AM Dart.Renwick..Jennifer

3/5/2020

[Dart Hawkesbury] Job Sheet - Renwick, Jennifer

120 Packaging 3-1 - Stock - B4B 8 pcs

3/27/20

0.00 0.00

Packaging 3 - 1 - B4B

Packaging 3 - 2 - B4B

Packaging 3 - 3 - B4B

Packaging 3 - 4 - B4B

Packaging 3 - 5 - B4B

Packaging 3 - 6 - B4B

Packaging 3 - 7 - B4B

Packaging 3 - 8 - B4B

Packaging 3 - 9 - B4B

Packaging 3 - 10 - B4B

Packaging 3 - 11 - B4B

Packaging 3 - 12 - B4B

Packaging 3 - 13 - B4B

Packaging 3 - 14 - B4B

Packaging 3 - 15 - B4B

Packaging 3 - 16 - B4B

Packaging 3 - 17 - B4B

Packaging 3 - 18 - B4B

Packaging 3 - 19 - B4B

Packaging 3 - 20 - B4B

Packaging 3 - 21 - B4B

Packaging 3 - 22 - B4B

Packaging 3 - 23 - B4B

Packaging 3 - 24 - B4B

Packaging 3 - 25 - B4B

Packaging 3 - 26 - B4B

Packaging 3 - 27 - B4B

Packaging 3 - 28 - B4B

Packaging 3 - 29 - B4B

Packaging 3 - 30 - B4B

Packaging 3 - 31 - B4B

Packaging 3 - 32 - B4B

Packaging 3 - 33 - B4B

Packaging 3 - 34 - B4B

Packaging 3 - 35 - B4B

Packaging 3 - 36 - B4B

Packaging 3 - 37 - B4B

130 QC 21 - SA

8 pcs

3/27/20

0.00 0.00

QC 21 - SA - 21

QC 21 - SA - 70

QC 21 - SA - 53

MAR 10 2020

Part Op 100 - 1- Cut material to 26" 2- Bend as per D5805-1 dwg 3- Drill holes with DT10651 as per D5805-1 dwg 4- Leaving  
 Descriptions: extra 1" material on bottom part 5- Remove markings on tube 6- Deburr

110 - QC5- Inspect part completeness to step on W/O

120 - Identify as per dwg & Stock Location: W4004

130 - QC21- Final Inspection - Work Order Release

## Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M4130NTS0.500W.035 4130 Square Tube .500 X .500 X .035W 17.4000 ft (2.175 ea)	100-Large Fab - Welded Assy-1	134588		

5260577

## Job Allocations

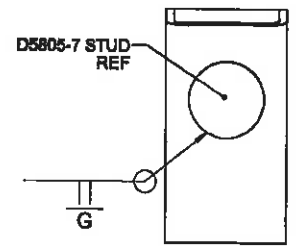
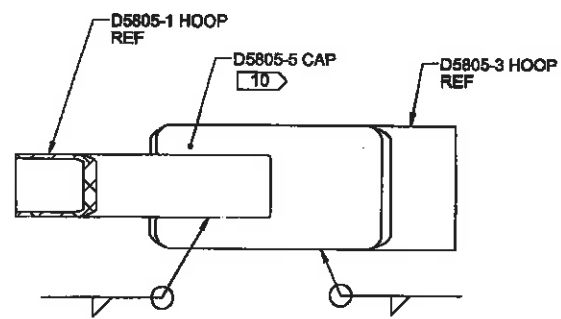
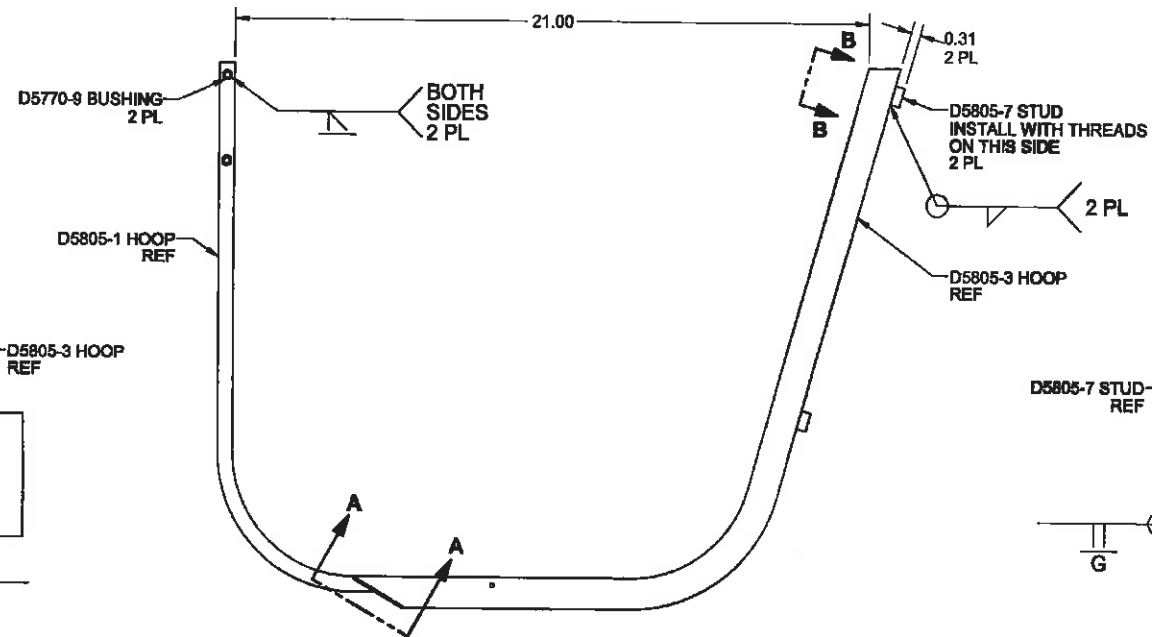
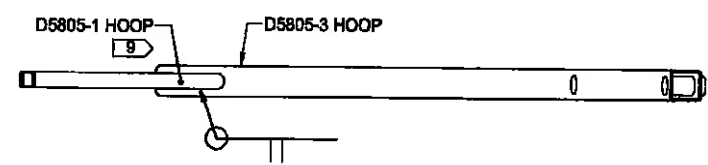
Operation	Component Part	Required	Inventory	Allocated
100-Large Fab - Welded Assy-1	M4130NTS0.500W.035	17	666	0

## Part Specifications

Specifications could not be found.

Plex 3/5/20 8:29 AM Dart.Renwick.Jennifer

QTY -041	P/N	DESCRIPTION
X	D5805-041	ATTACHMENT HOOP
2	D5770-9	BUSHING
1	D5805-1	HOOP
1	D5805-3	HOOP
1	D5805-5	CAP
2	D5805-7	STUD



**D5805-041 ATTACHMENT HOOP**  
(DERIVED FROM AERO DESIGN P/N 76423-01)

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 207480

RELEASED  
2020 FEB 18 WD  
ECN 2020 - 521

UNDER REVIEW  
URF 2020-522 20.02.14 (NO)

- NOTES:
- 1) MATERIAL: N/A
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010
  - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044
  - 7) WEIGHT: 2.42 lbs
  - 8) WELD PER DART QSI 004. GRIND WELDS FLUSH IF REQUIRED.
  - 9) GRIND END OF D5805-1 HOOP TO FIT SLOT OF D5805-3 HOOP
  - 10) GRIND SLOT OF D5805-5 CAP TO FIT D5805-1 HOOP

A NEW ISSUE		ZF	20.01.13
REV.	DESCRIPTION	BY	DATE
DESIGN	ZF		
DRAWN	ZF		
CHECKED	KPT		
MFG. APPR.	DD		
APPROVED	NO		
DE APPR.	CP		
DATE	20.01.13		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D5805**

TITLE **ATTACHMENT HOOP**

REV. A

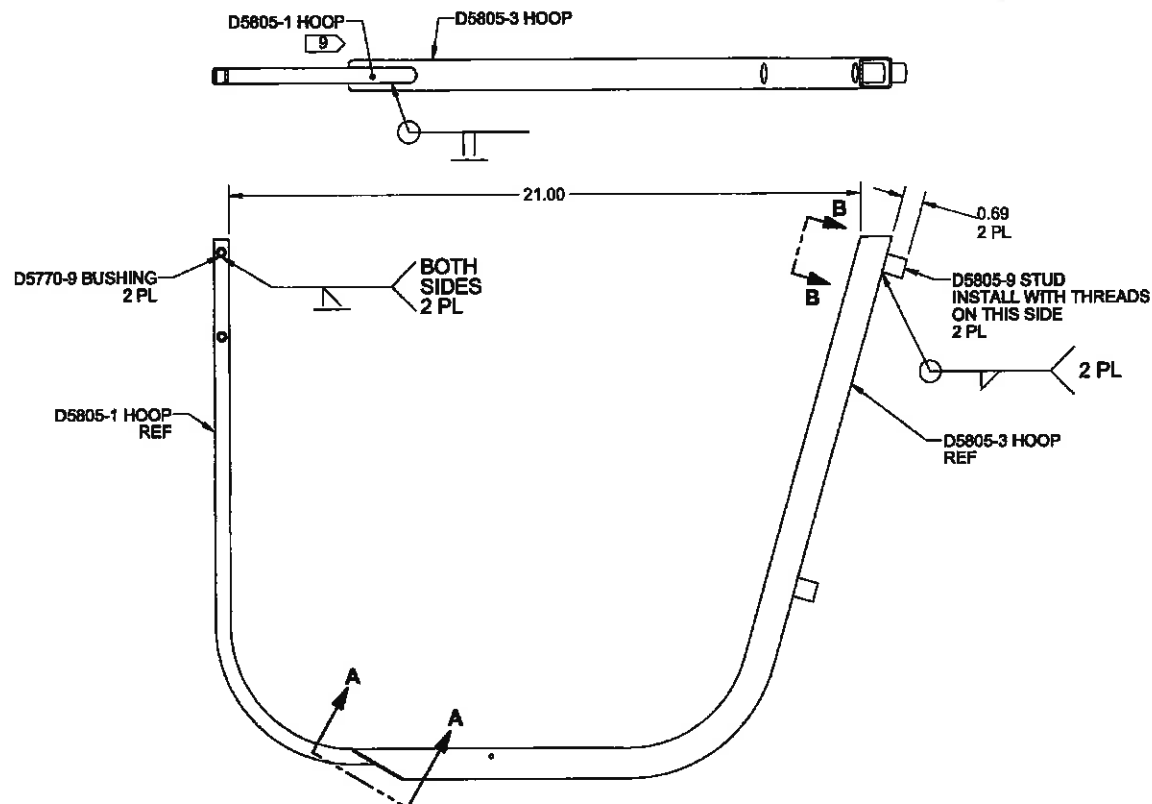
SHEET 1 OF 6

SCALE NTS

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APPROVED

QTY -043	P/N	DESCRIPTION
X	D5805-043	ATTACHMENT HOOP
2	D5770-9	BUSHING
1	D5805-1	HOOP
1	D5805-3	HOOP
1	D5805-5	CAP
2	D5805-9	STUD



**D5805-043 ATTACHMENT HOOP**  
(DERIVED FROM AERO DESIGN P/N 78423-07)

UNDER REVIEW

URF 2020-522 20.02.14 (NO)

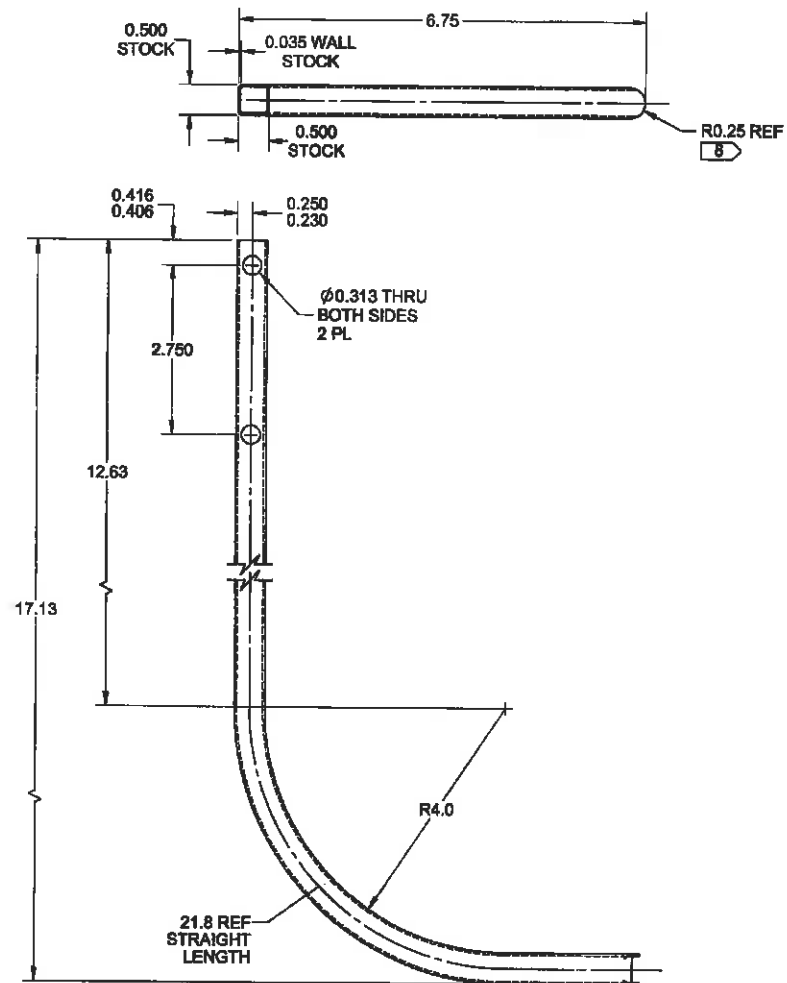
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044
- 7) WEIGHT: 2.49 lbs
- 8) WELD PER DART QSI 004. GRIND WELDS FLUSH IF REQUIRED.
- 9) GRIND END OF D5805-1 HOOP TO FIT SLOT OF D5805-3 HOOP
- 10) GRIND SLOT OF D5805-5 CAP TO FIT D5805-1 HOOP

**RELEASED**  
2020 FEB 18/20

APPROVED

DESIGN	ZF	<b>DART AEROSPACE LTD</b>	
DRAWN	ZF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	KPT	DRAWING NO.	REV. A
MFG. APPR.	DD	<b>D5805</b>	SHEET 2 OF 8
APPROVED	NO	TITLE	SCALE
DE APPR.	CP	<b>ATTACHMENT HOOP</b>	NTS
DATE	20.01.13	COPYRIGHT © 2020 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS COVENANT THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	



**D5805-1 HOOP**

**NOTES:**

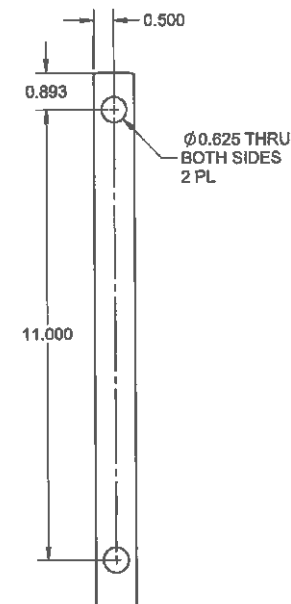
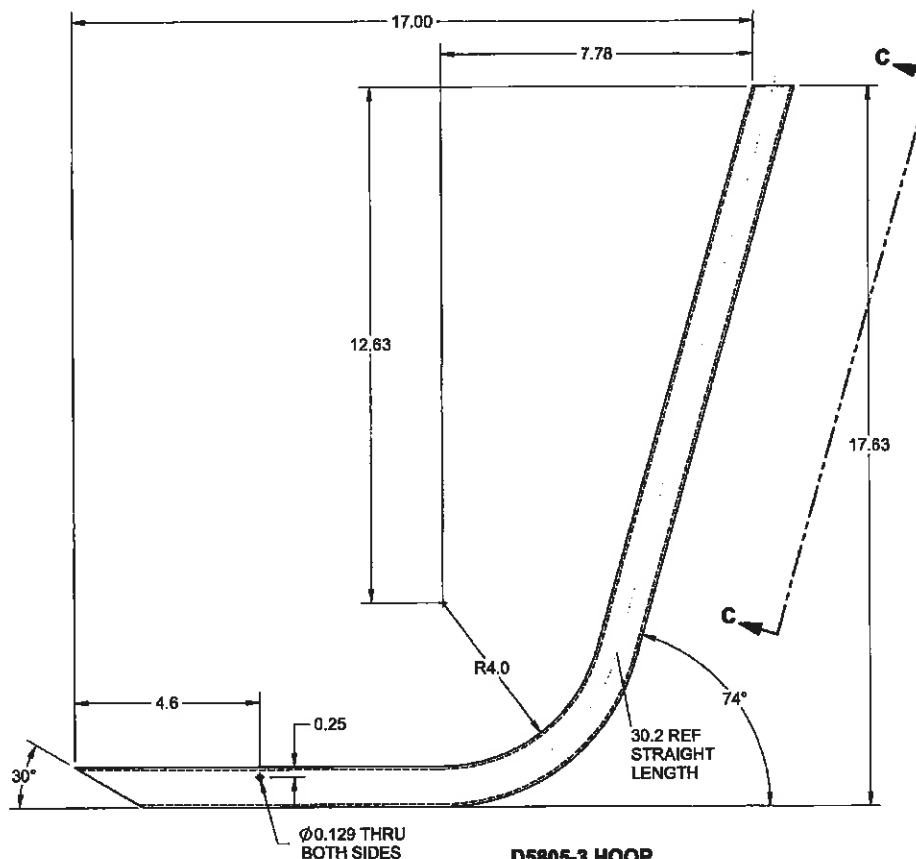
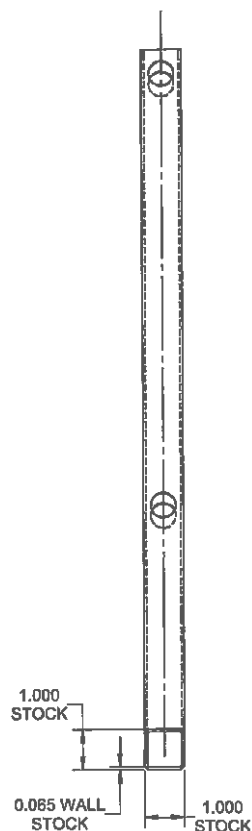
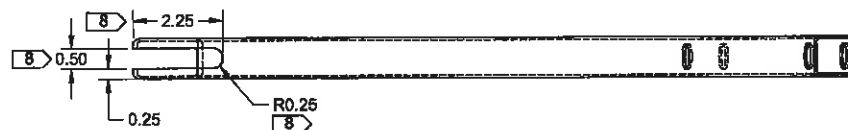
- 1) MATERIAL: AISI 4130N STEEL SQUARE TUBING, 1/2 X 0.035 WALL  
PER MIL-T-6738 OR AMS 6371/6360/6361/6362/6373/6374  
REF DART SPEC M4130N-TS0.500W.035
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.37 lbs
- 8) GRIND END TO FIT SLOT OF D5805-3 HOOP AT ASSEMBLY

**RELEASED**  
2020 FEB 18 MD

APPROVED

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DRAWN	ZF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	KPT	DRAWING NO.	REV. A
MFG. APPR.	DD	<b>D5805</b>	SHEET 3 OF 6
APPROVED	NO	TITLE	SCALE
DE APPR.	CP	<b>ATTACHMENT HOOP</b>	NTS
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UNDER REVIEW  
URF 2020-522 20.02.14 (NO)



VIEW C-C

D5805-3 HOOP

NOTES:

- 1) MATERIAL: AISI 4130N STEEL SQUARE TUBING, 1 X 0.065 WALL  
PER MIL-T-6736 OR AMS 6371/6360/6361/6362/6373/6374  
REF DART SPEC M4130N-TS1.000W.065
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.84 lbs
- 8) GRIND SLOT TO FIT D5805-1 HOOP AT ASSEMBLY.

RELEASED  
2020 FEB 18 NO

APPROVED

DESIGN ZF  
DRAWN ZF  
CHECKED KPT  
MFG. APPR. DD  
APPROVED NO  
DE APPR. CP  
DATE 20.01.13

UNDER REVIEW

URF 2020-522 20.02.14 (NO)

DART AEROSPACE LTD  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.  
D5805

REV. A

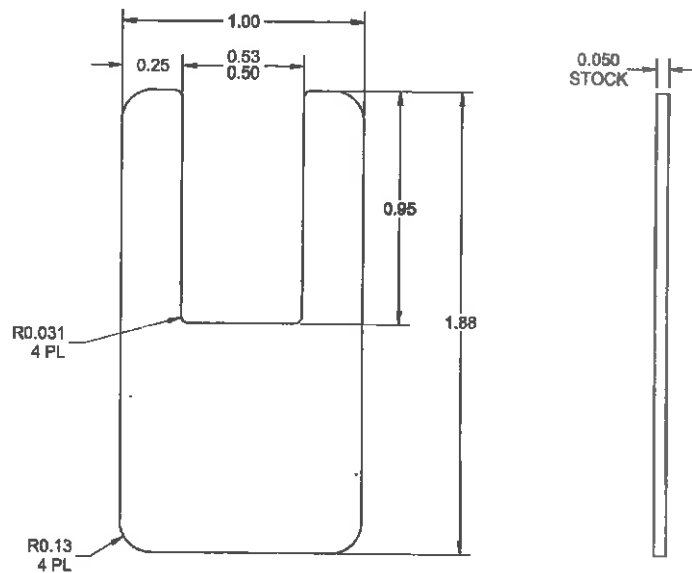
SHEET 4 OF 6

SCALE

NTS

TITLE  
ATTACHMENT HOOP

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**D5805-5 CAP**  
(DERIVED FROM AERO DESIGN P/N 76423-04)

UNDER REVIEW  
URF 2020-522 20.02.14 (NO)

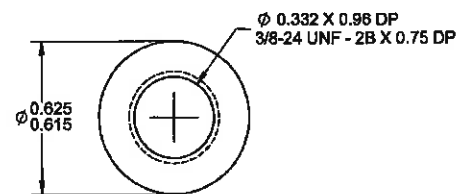
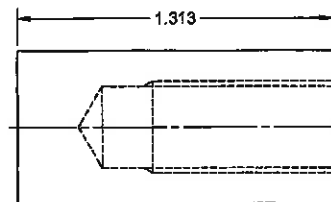
**NOTES:**

- 1) MATERIAL: AISI 1010/1025 STEEL SHEET, COLD ROLLED, #18 GA (0.050 THICK)  
PER ASTM A36/A366/A1008 OR CSA G40-21 35W/44W/50W/60W/70W  
REF DART SPEC M1010-S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

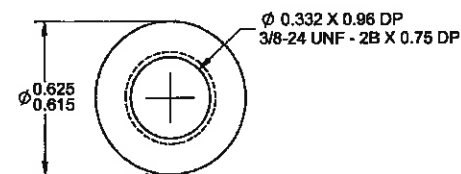
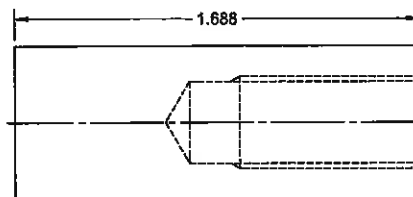
**RELEASED**  
2020 FEB 18 *ND*

APPROVED

DESIGN	ZF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. <b>D5805</b> TITLE <b>ATTACHMENT HOOP</b> <small>COPYRIGHT © 2013 BY DART AEROSPACE LTD          THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	REV. A
DRAWN	ZF		SHEET 5 OF 6
CHECKED	KPT		SCALE
MFG. APPR.	DD		NTS
APPROVED	NO		
DE APPR.	CP		
DATE	20.01.13		



**D5805-7 STUD**  
(DERIVED FROM AERO DESIGN P/N 76423-05)



**D5805-9 STUD**  
(DERIVED FROM AERO DESIGN P/N 76423-06)

UNDER REVIEW  
URF 2020-522 20.02.14 (NO)

**NOTES:**

- 1) MATERIAL: AISI 1018/1025 STEEL ROUND BAR  
PER MIL-S-7087 OR ASTM A108  
REF DART SPEC M1018-R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: -7: 0.09 lbs  
-9: 0.12 lbs

**RELEASED**  
2020 FEB 18 10

APPROVED

DESIGN	ZF
DRAWN	ZF
CHECKED	KPT
MFG. APPR.	DD
APPROVED	NO
DE APPR.	CP
DATE	20.01.13

<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. <b>D5805</b>	REV. A
TITLE <b>ATTACHMENT HOOP</b>	SHEET 6 OF 6
SCALE NTS	
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Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K8A 1K7  
Canada

Tel (613) 632-5200

# **PURCHASE ORDER** **POHB045883**



**Supplier:** FAC001-VU  
Factory Steel  
14020 Oakland Ave.  
Detroit, MI 48203 USA  
Phone: 313 883 6300  
Fax: 313 883 4883

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K8A 1K7 Canada  
Phone: 613-632-5200

**PO No:** POHB045883

**PO Date:** 2/18/20

**Due Date:** 2/28/20

**Purchase Order**

**Revision:**

**Revision Date:**

FEB 19 2020

**Issued By:** Laviole, Chantal  
Phone: 613-623-5200 Ext: 242  
Fax: 613-632-1053  
claviole@dartaero.com

**Via:** Ground

**Pynt Terms:** Net 30

**Freight Terms:**

**Special Comments:**

Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		M4130NTS0.500W.035			4130 Square Tube .500 X .500 X .035W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374 receive ft	Firmed	-	2/28/20	600 ft	0 ft	600 ft	\$6.49/ft	\$3,894.00
												Grand Total: \$3,894.00	

## Order Notes

### Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable). No Raw Metals from China or Soviet Bloc Countries. (DFARS)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program.

A049 supplier awareness.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaero.com](http://www.dartaero.com) for further explanation.

Plex 2/19/20 2:52 PM Dart.Laviole.Chantal

4111

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NT50.500W.035 PO / BATCH NO.: P04100Y5883  
 DATE: MAR 04 2020 5260577

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 611 FT  
 QUANTITY INSPECTED: 611 FT  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .500X.500 W.035  
 THICKNESS RECEIVED: .500X.500 W.035  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> N	MIL-T-6736
CORRECT THICKNESS	<input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> N	HIT 25537-
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>MAR 04 2020</u>	SIGNED OFF BY: <u>DAS</u>	DATE: <u>82</u>	DATE: <u>8-89</u>

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

LIME1

POH13045883

M4130NTS0.500W.035

**DART**

DESIGN DH	DRAWN BY DH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. M4130N-TS	REV. A SHEET 1 OF 1
DATE 05.02.09		TITLE 4130N SQUARE TUBING	SCALE NTS
A	05.02.09	NEW ISSUE	

PURCHASE MATERIAL:

AISI4130N STEEL SQUARE TUBING PER ONE OF  
THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371,  
6360, 6361, 6362, 6373 OR 6374

PART NUMBER:

M4130N-TS | A.AAA | W | .TTT |

DAS  
82  
1-89

WHERE    A.AAA    =    WIDTH IN INCHES  
          TTT       =    WALL THICKNESS IN INCHES

EXAMPLE: 0.50" X 0.035" WALL    =    M4130N-TS0.500W.035

RELEASED  
05.02.09

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**PLYMOUTH TUBE CO.**

1209 East 12th Street, Stretor, Illinois 61084  
Phone: (815) 673-1616 Fax: (815) 672-7343

TRUST YOUR SOURCE. ACCEPT NO SUBSTITUTIONS!

# PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

179687 - 1 / 0

## SHIP TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

WORK ORDER 023814

HEAT NUMBER 25537

PCS/HEAT

0

MELT SOURCE Tinker Steel - Melt/Mfg. USA

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LOADING NO	CERT ID / REV	CERT DATE								
3999	SQ-N12035												
<b>PART DESCRIPTION</b> SHSQ0500035J200 ***** Square OD ***** Side1: 0.5000 Max:0.5100 Min:0.4900 Side2: 0.5000 Max:0.5100 Min:0.4900 Wall: 0.0350 Max:0.0380 Min:0.0320 Length: 40.00 ± 0.25 Spec: MIL-T 67368 Seamless Aircraft Grade: 4340 Anneal: Cond N													
<b>CERTIFICATION REQUIREMENTS</b> FAR BAA (FAR 52.225-1 Buy America Act Supplies), DFARS 252.225-7001 By America Act & Bal. of Payments Program FAR TAA (FAR 52.225-5 Trade Agreement Paragraph 1.4.4.1) This material is produced in accordance with the requirements of ASTM A-450. The Grain size is determined and reported by the raw material supplier in accordance to ASTM E-112. This raw material was magnetic particle inspected by the raw material supplier in accordance to AMS 2840J and/or ASTM E-1444, and rated as Frequency, and Severity to AMS 2301, latest revision. Yield is determined by using the 0.2% offset method. Additional Specifications - AMS-T 67368, 6360P & 6371L. Material produced in accordance to ASTM A-519-17. Jominy results: J(5/16")=38 J(8/16")=31.													
<b>Chemical Analysis</b>													
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn
.30	.56	.008	.005	.29	.025	1.02	.20	.13	.000	.18	.009	.003	.009
<b>Physical Properties</b>													
Freq.	Severity	Grain Size											
.000	.000	7											
<b>Mechanical Properties</b>													
<b>TEST</b>	<b>UNITS</b>	<b>TESTS</b>	<b>HIGH</b>	<b>LOW</b>	<b>AVERAGE</b>	<b>STD-DEV</b>							
Tensile	Psi	6	121110	115340	118173	2536							
Yield	Psi	6	115370	109700	112525	2436							
Elongation	%	6	17	17	17	0							
Rockwell C	Rc	6	22	22	22	0							
<b>TEST</b>	<b>RESULT</b>												
Decarb/OD	Pass												
Total ID/OD decarb	Pass												

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Stretor in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Janet DeRosier*  
Quality Assurance



**PLYMOUTH TUBE CO.**

1200 East 12th Street, Streator, Illinois 61354  
Phone: (815) 678-1615 Fax: (815) 672-7348

**TRUE TO YOUR SOURCE ACCEPT NO SUBSTITUTIONS!**

**PRODUCT CERTIFICATION**

SALES ORDER - LINE / RLS

179667-1 / 0

**SHIP TO**

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

WORK ORDER 02304

HEAT NUMBER 25537

PCS/HEAT 0

MELT SOURCE Tinklen Steel - Melt/Wfgr. USA

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LOADING NO	CERT ID / REV	CERT DATE
3999	SQ-N12035				

PART DESCRIPTION	SHSQ0500035J200
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**Additional Specification(s)**

TEST	UNITS	TESTS	HIGH	LOW	AVERAGE	STD-DEV
Brinell	Brinell	0	251	187	225	27

This test report data is for the heat Chemistry Stated above.

The material in this test report is:

- 1) Drawn in the USA
- 2) Free from Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Mercury contamination.
- 3) NAFTA compliant.

End of Certification

DAS  
82  
9-89

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streator in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Janet Burrows*  
Quality Assurance

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

Job: _____  Part No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/>	<b>DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Water Jet <input type="checkbox"/>            Supplier <input type="checkbox"/>            Quality <input type="checkbox"/> </div> </div>			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
<b>Root Cause</b>  Operator <input type="checkbox"/> Manufacturing Process <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Handling/Preservation <input type="checkbox"/> Material <input type="checkbox"/> Product Improvement <input type="checkbox"/> Process Improvement <input type="checkbox"/> Human Factors <input type="checkbox"/>		<b>FAULT CATEGORY</b>  <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Pressure/Forced  <input type="checkbox"/> Bending  <input type="checkbox"/> Crushing  <input type="checkbox"/> Cracks  <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist  <input type="checkbox"/> Marks/Chatter  <input type="checkbox"/> Mislabeled         </div> <div> <input type="checkbox"/> Contamination  <input type="checkbox"/> Misaligned/off center  <input type="checkbox"/> BOM/Route  <input type="checkbox"/> Broken/Damage/Defect  <input type="checkbox"/> Incomplete/Unclear Instructions  <input type="checkbox"/> Drill Holes  <input type="checkbox"/> Fit/Function         </div> <div> <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Folio/Program  <input type="checkbox"/> Grain Direction  <input type="checkbox"/> Weld  <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Out of Sequence  <input type="checkbox"/> Off-set/Set-up         </div> <div> <input type="checkbox"/> Positioned Wrong  <input type="checkbox"/> Outside Tolerance  <input type="checkbox"/> Drawing  <input type="checkbox"/> Finish  <input type="checkbox"/> Part Lost/Missing  <input type="checkbox"/> Misread         </div> </div>			
Other/Details:					